AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (withdrawn): A process for production of an organic transistor, said organic transistor comprising:

a substrate;

a gate electrode on the substrate;

a gate insulating layer on the substrate and the gate electrode;

an organic semiconductor layer on a surface of the gate insulating layer;

a source electrode on the organic semiconductor layer; and

a drain electrode on the organic semiconductor layer,

wherein the surface of the gate insulating layer on which the organic semiconductor layer is formed has a large number of hydroxyl groups uniformly, and

said process comprising:

preparing a gate insulating layer;

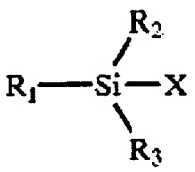
forming a surface-treated layer on the gate insulating layer; and

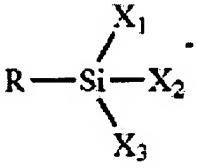
forming an organic semiconductor layer on the surface-treated layer,

wherein the gate insulating layer is irradiated with ultraviolet rays in an ozone atmosphere before the formation of the surface-treated layer.

2. (withdrawn): The process according to Claim 1, wherein irradiating the gate insulating layer with ultraviolet rays is effected in an ozone concentration of from 10 to 1,000 ppm at an illumination intensity of 0.01 mW/cm^2 or more for an illumination time of 10 minutes or more.

3. (withdrawn): The process according to Claim 2, wherein irradiating the gate insulating layer with ultraviolet rays is followed by the formation of the surface-treated layer by at least one compound selected from the group consisting of a mono- or trichlorosilane compound having a functional group containing 8 or more carbon atoms represented by one of chemical formulas shown below, a mono- or trialkoxysilane compound having a functional group containing 8 or more carbon atoms represented by one of the chemical formulas shown below, and hexamethyldisilazalane,





where R_1 and R each independently represents a functional group having 8 or more carbon atoms containing hydrogen, oxygen, nitrogen, sulfur or halogen;

X represents a chlorine atom, methoxy group or ethoxy group;

X_1, X_2 and X_3 each independently represents a chlorine atom, methoxy group or ethoxy group; and

R_2 and R_3 each independently represents an alkyl group having at least one carbon atom.

4. (withdrawn): The process according to Claim 3, wherein the surface treatment is followed by vacuum deposition of an organic semiconductor layer at a substrate temperature of from 40°C to 70°C.

5. (withdrawn): The process according to Claim 4, wherein mobility of the organic semiconductor layer is 0.5 cm^2/Vs or more.

6. (currently amended): An organic transistor comprising:

a substrate;

a gate electrode on the substrate;

a gate insulating layer on the substrate and the gate electrode wherein the surface of the gate insulating layer is a surface-treated layer and the gate insulating layer is irradiated with ultraviolet rays in an ozone atmosphere before forming the surface-treated layer;

an organic semiconductor layer on a surface of the gate insulating layer;

a source electrode on the organic semiconductor layer; and

a drain electrode on the organic semiconductor layer,

wherein the surface of the gate insulating layer on which the organic semiconductor layer is formed has a large number of hydroxyl groups uniformly produced.

7. (original): The organic transistor according to Claim 6, wherein mobility of the organic semiconductor layer is 0.5 cm^2/Vs or more.

8. (currently amended): An organic transistor comprising:

a substrate;

a gate electrode on the substrate;

a gate insulating layer on the substrate and the gate electrode wherein the surface of the gate insulating layer is a surface-treated layer and the gate insulating layer is irradiated with ultraviolet rays in an ozone atmosphere before forming the surface-treated layer;

a source electrode on the gate insulating layer;

a drain electrode on the gate insulating layer;

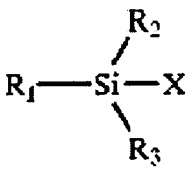
an organic semiconductor layer on a surface of the gate insulating layer; wherein the surface of the gate insulating layer on which the organic semiconductor layer is formed has a large number of hydroxyl groups uniformly produced.

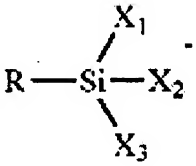
9. (original): The organic transistor according to Claim 8, wherein mobility of the organic semiconductor layer is 0.5 cm^2/Vs or more.

10. (canceled).

11. (previously presented): The organic transistor according to claim ~~10~~6, wherein the surface-treated layer is formed by at least one compound selected from the group consisting of a mono- or trichlorosilane compound having a functional group containing 8 or more carbon atoms represented by one of chemical formulas shown below, a mono- or

trialkoxysilane compound having a functional group containing 8 or more carbon atoms represented by one of the chemical formulas shown below, and hexamethyldisilazalane,





where R_1 and R each independently represents a functional group having 8 or more carbon atoms containing hydrogen, oxygen, nitrogen, sulfur or halogen;

X represents a chlorine atom, methoxy group or ethoxy group;

X_1, X_2 and X_3 each independently represents a chlorine atom, methoxy group or ethoxy group; and

R_2 and R_3 each independently represents an alkyl group having at least one carbon atom.